

June 8, 2009

Mr. Michael Forbes City Planner CITY OF BURBANK 275 East Olive Avenue Burbank, California 91502

Bureau Veritas Project No. 25098-098191.01

Subject:

Status Report of Vapor Extraction System Operation (VES)

Lockheed-Martin B-1 Site

January 29, 2009 through April 20, 2009

Dear Mr. Forbes:

Bureau Veritas North America, Inc. (Bureau Veritas) has prepared the following status report for the Vapor Extraction System (VES) operation at the Lockheed-Martin B-1 Site for the period of January 29, 2009 through April 20, 2009. The purpose of this report is to provide the analytical results of the effluent air sample and an independent calculation of the system's air emissions and its compliance with the permit conditions. The remaining sections of this report are as follows:

- Background
- Bureau Veritas Field Activities
- Results of Laboratory Analysis
- Health Risk Assessment Calculations
- Conclusions

#### **BACKGROUND**

Alton Geoscience conducted a "Phase I" and "Phase II" of VES effluent sampling and health risk assessment calculations for the Lockheed-Martin B-1 facility. Phase I consisted of twelve weekly health risk reports based on samples collected between September 2, 1997 and February 9, 1998. Phase II included twelve bi-weekly health risk assessment calculations based on samples collected between February 16, 1998 and September 9, 1998. Phase III consisted of monthly sampling between October and December 1998.

Phase IV of the VES effluent sampling consists of VES effluent sample acquisition, laboratory analyses, and health risk assessment calculations to be performed once per quarter for the remainder of the project. The first and second quarterly health risk

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assessment calculations were provided by Alton in reports dated January 18, 1999 and May 24, 1999, respectively.

Since March 2000, Bureau Veritas personnel have been collecting effluent samples of the unit at a frequency of two to four events per year. When the system operates continuously throughout a 12-month period, samples are collected on a quarterly basis. The frequency of sampling is determined by Earth Tech (an environmental consulting firm), which notifies Bureau Veritas personnel within a few days before they collect effluent samples so that Bureau Veritas can collect a sample simultaneously.

Earth Tech was rebound testing during the initial Bureau Veritas sampling event. In early 2000, Earth Tech re-started the system for continuous operation. In September 2002, they continued the rebound test efforts in which the system is down for extended periods of time then re-started for testing purposes (see table below). During these activities, a sample is collected by Bureau Veritas and a report is prepared.

Date Issued	Sampling Date
November 23, 1999	October 14, 1999 (rebound testing)
March 13, 2000	(Restart of system)
May 16, 2000	March 2000
July 12, 2000	June 2000
November 17, 2000	September 2000
February 22, 2001	January 2001
May 31, 2001	April 2001
August 21, 2001	August 5, 2001
November 12, 2001	October 19, 2001
March 29, 2002	January 28, 2002
June 6, 2002	April 29, 2002
August 23, 2002	July 26, 2002
January 8, 2003	October 30, 2002 (rebound testing)
March 4, 2003	February 3, 2003
January 7, 2004	December 9, 2003 (2 reports issued)
September 3, 2004	August 18, 2004
July 13, 2005	May 24, 2005
September 1, 2005	August 16, 2005
November 18, 2005	October 17, 2005
April 25, 2006	April 3, 2006
July 15, 2006	June 27, 2006
April 9, 2007	March 9, 2007
August 10, 2007	June 6, 2007
November 30, 2007	October 16, 2007
June 6, 2008	April 16, 2008
September 30, 2008	July 29, 2008
December 31, 2008	October 16, 2008
March 11, 2009	January 28, 2009
June 8, 2009*	April 20, 2009



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# **BUREAU VERITAS FIELD ACTIVITIES**

On April 20, 2009, personnel from Bureau Veritas met with Earth Tech personnel to conduct sampling of air emissions at the Lockheed-Martin B-1 Site VES. Bureau Veritas and Earth Tech personnel each collected an exhaust sample using an evacuated Summa canister; connected via a disposable Teflon® tube to the VES unit's sampling port.

During the sampling period, the exhaust flow rate was 1,161 standard cubic feet per minute (scfm). The two stack analyzers monitoring volatile organic compound (VOC) concentration varied this visit due to the fact that one of the analyzers was not calibrating. The readings were 0.0 and 0.21 parts per million (ppmv). Laboratory results indicated a total VOC concentration of 0.032 ppmv, as described in the following section. Discrepancies between stack analyzers and laboratory results are not uncommon, since one is quantitative and the other is qualitative. In addition, the stack analyzers may detect additional VOC compounds that are not in the TO-14A analysis conducted by the laboratory. Direct readings of VOC emission rates in the field were within acceptable operating conditions for the VES. The 15-minute average VOC emission rate indicated at the time was 0.2304 pounds per day (lbs/day), while the 24-hour average value was 0.1515 lbs/day.

The sample collected by Bureau Veritas was submitted to TestAmerica Laboratories, Inc., Santa Ana, California, under chain of custody protocol for analysis by gas chromatography/mass spectrometry (GC/MS) in accordance with EPA Method TO-14A.

# **RESULTS OF LABORATORY ANALYSES**

The results from the TO-14A analysis of the sample taken on April 20, 2009 indicated that five (5) compounds were present in concentrations at or above the detection limits. Following are a list of these compounds and the concentrations indicated by the analysis:

Compound	Concentration (ppmv) <sup>(1)</sup>
Dichlorodifluoromethane	0.0065
1,1-Dichloroethene	0.007
Tetrachloroethene	0.0042
Trichloroethene	0.0067
1,1,2-Trichloro-1,2,2- trifluoroethane	0.008

<sup>1</sup> ppmv = parts per million by volume



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The above compounds have all been detected in previous sampling events. Dichlorodifluoromethane, also known as Freon 12, was detected at levels comparable to past data. 1,1-Dichloroethene (1,1 DCE), a product of perchloroethelyne (PCE) breakdown, was detected at levels just above the reporting limit. The number of detected compounds (five) increased compared to the sample collected on January 28, 2009 (four).

The increase in the number of compounds and total VOC concentration is partially due to the presence of PCE and TCE as both were slightly higher than the October 2008 sample. Overall, lab data is consistent with the historical trend.

Using the analytical data, an overall VOC emission rate of 0.020 lb/day was calculated. This value is comparable to the 24-hour average VOC reading (0.1515 lb/day) provided by the in-line organic vapor monitoring system. In addition, this value is below the calculated VOC emission levels designated by the Conditional Use Permit (CUP) limit of 9.8 lb/day. These results, along with the previous calculated total VOC emissions for the unit, were plotted on Figure 1. Vinyl chloride was not detected in the sample taken. Therefore, its CUP limit of 0.14 pounds per day was not exceeded.

# **HEALTH RISK ASSESSMENT CALCULATIONS**

In accordance with the CUP, the stack concentrations of each constituent and the exhaust flow rates were used to calculate the excess cancer risk resulting from operation of the VES. The first risk calculation was to determine the risk if the unit was operated for a lifetime period of 70 years, evaluating the risk to both workers and local residents for those chemicals specified in SCAQMD Rule 1401, as adopted at the time the unit was permitted. The second risk calculation was to determine the risk to both workers and local residents for the life of the project (the 8.5-year operating period), for all detected chemicals for which carcinogenic risk factors are available.

The resulting cancer risk calculations for both conditions indicated an acceptable Maximum Individual Cancer Risk (MICR) significantly less than one in one million. The results from these calculations, along with the MICR results from previous calculations for the unit, are presented on Figures 2 and 3, for 70-year and 8.5-year calculations, respectively.

#### **CONCLUSIONS**

Based on the results of the information gathered and samples taken on April 20, 2009, the following conclusions can be made:



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- The number of compounds detected increased compared to the previous sampling event. All of the detected compounds have exceeded their reporting limits in the past. (See attached lab data for specific reporting limits).
- All measured emissions are within the permit conditions. Since vinyl chloride was not detected, its CUP limit of 0.14 pounds per day was not exceeded. Excess cancer risks (MICR) were less than one in one million for workers and local residents, using both 70-year lifetime and 8.5-year operating period risk calculations.

If you have any questions or require additional information regarding this status report, please contact one of the undersigned at 714.431.4100.

Prepared by:

Kevin Martin

Environmental Consultant

**Environmental Services** 

The al Mans

Reviewed by:

Gustavo Valdivia, P.E. No. C

Manager, Engineering and Rem

**Environmental Services** 

KM/GV:dh

Attachments:

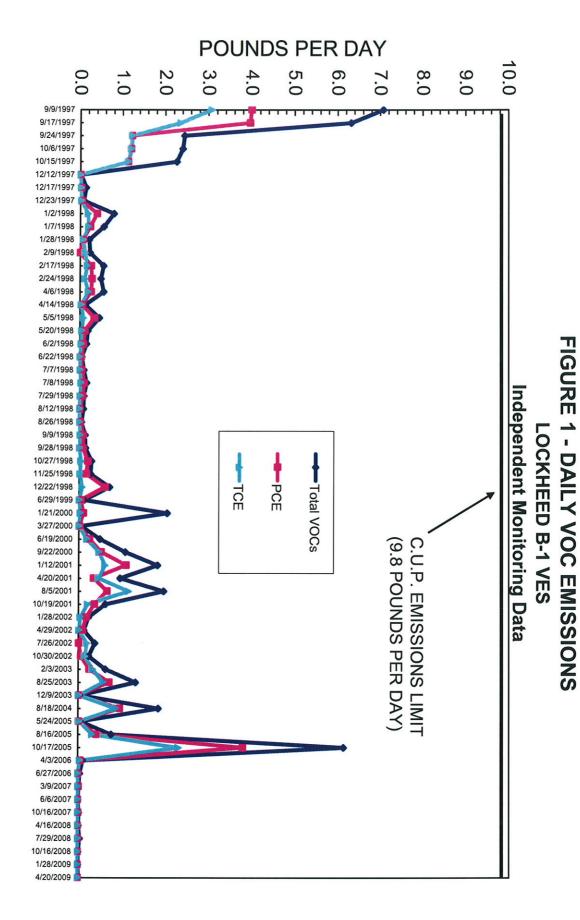
Figure 1 - Daily VOC Emissions

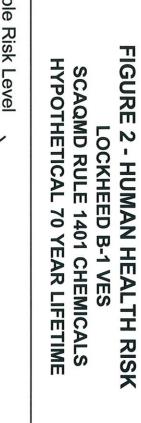
• Figure 2 - Human Health Risk (70 Year Lifetime)

• Figure 3 - Human Health Risk (8.5 Year Operating Period)

Laboratory Report

cc: Stacey Ebiner, South Coast Air Quality Management District





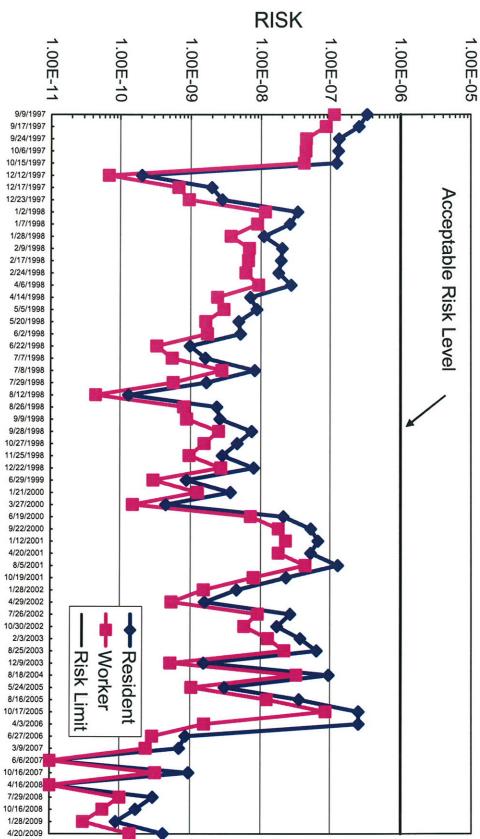
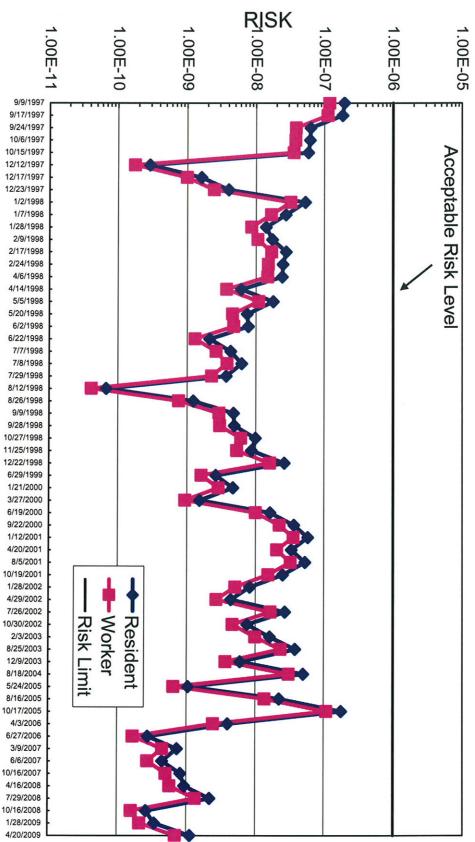


FIGURE 3 - HUMAN HEALTH RISK LOCKHEED B-1 VES DURING 8.5 YEAR OPERATING PERIOD



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April 28, 2009

#### LABORATORY REPORT

Client:

Bureau Veritas N.A. Inc 1565 MacArthur Blvd Costa Mesa, CA 92626 Attn: Gustavo Valdivia Work Order:

LSD0209

Project Name:

City of Burbank

Project Number:

25098-098191.01.001

Date Received:

04/22/09

TestAmerica Los Angeles certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the Corrective Action Report. NELAC Certification Number for TestAmerica Los Angeles is E87652. The test results listed within this Laboratory Report pertain only to the samples tested in the laboratory. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica.

The Chain of Custody, I page, is included and is an integral part of this report. This entire report was reviewed and approved for release.

If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 714-258-8610.

Analyses included in this report were performed by the laboratory shown at the top of this report unless otherwise indicated.

Approved By:

Marisol Tabirara Project Manager

Manual Talavane

1 of 14

LSD0209



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Bureau Veritas N.A. Inc 1565 MacArthur Blvd Costa Mesa, CA 92626 Gustavo Valdivia

Work Order:

LSD0209

Received:

04/22/09 09:30

Reported:

04/28/09 12:55

Project:

City of Burbank

Project Number:

25098-098191.01.001

SAMPLE IDENTIFICATION

LAB NUMBER

COLLECTION

**MATRIX** 

**CONTAINER TYPE** 

B-1-VES-042009

LSD0209-01

04/20/09 11:25

Air

Passivated Canister



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LSD0209

Received:

04/22/09 09:30

Reported:

04/28/09 12:55

Project:
Project Number:

City of Burbank 25098-098191.01.001

#### ANALYTICAL REPORT

Analyte		Data				Date			QC
	Result	Qualifiers	Units	RL	Dilution	Analyzed	Instrument	Analyst	Batch
Sample ID: LSD0209-01 (B-1-VES-042	2009 - Air)					Ca	Lada 04/20/00 1	1.75	
EPA TO14A - Volatile Organic Compound	,					Samp	led: 04/20/09 11	1:25	
2277 X OT WE - Yourne Organic Compound	as by Cenno								
Acetone	ND		ppbv	10	1.0	04/22/09 22:15	MSB	AA	9D23002
Benzene	ND		ppbv	3.0	1.0	04/22/09 22:15	MSB	AA	9D23002
Benzyl chloride	ND		ppbv	10	1.0	04/22/09 22:15	MSB	AA	9D23002
Bromodichloromethane	ND		ppbv	2.0	1,0	04/22/09 22:15	MSB	AA	9D23002
Bromoform	ND		ppbv	2.0	1.0	04/22/09 22:15	MSB	AA	9D23002
Bromomethane	ND		ppbv	4.0	1.0	04/22/09 22:15	MSB	AA	9D23002
2-Butanone (MEK)	ND		ppbv	10	1.0	04/22/09 22:15	MSB	AA	9D23002
Carbon disulfide	ND		ppbv	10	1.0	04/22/09 22:15	MSB	AA	9D23002
Carbon tetrachloride	ND		ppbv	2.0	0,1	04/22/09 22:15	MSB	AA	9D23002
Chlorobenzene	ND		ppbv	2.0	1.0	04/22/09 22:15	MSB	AA	9D23002
Dibromochloromethane	ND		ppbv	2.0	1.0	04/22/09 22:15	MSB	AA	9D23002
Chloroethane	ND		ppbv	4.0	1.0	04/22/09 22:15	MSB	AA	9D23002
Chloroform	ИD		ppbv	2.0	1,0	04/22/09 22:15	MSB	AA	9D23002
Chloromethane	ND		ppbv	4.0	1.0	04/22/09 22:15	MSB	AA	9D23002
1,2-Dibromoethane (EDB)	ND		ppbv	2.0	1.0	04/22/09 22:15	MSB	AA	9D23002
1,2-Dichlorobenzene	ND		ppbv	2.0	1.0	04/22/09 22:15	MSB	AA	9D23002
1,3-Dichlorobenzene	ND		ppbv	4.0	1.0	04/22/09 22:15	MSB	AA	9D23002
1,4-Dichlorobenzene	ND		ppbv	4.0	1.0	04/22/09 22:15	MSB	AA	9D23002
Dichlorodifluoromethane	6.5		ppbv	3.0	1.0	04/22/09 22:15	MSB	AA	9D23002
1,1-Dichloroethane	ND		ppbv	2.0	1,0	04/22/09 22:15	MSB	AA	9D23002
1,2-Dichloroethane	ND		ppbv	3.0	1.0	04/22/09 22:15	MSB	AA	91023002
cis-1,2-Dichloroethene	ND		ppbv	2.0	1.0	04/22/09 22:15	MSB	AA	9D23002
trans-1,2-Dichloroethene	ND		ppbv	2.0	1.0	04/22/09 22:15	MSB	AA	9D23002
1,1-Dichloroethene	7.0		ppbv	2.0	1,0	04/22/09 22:15	MSB	AA	9D23002
1,2-Dichloropropane	ND		ppbv	3.0	1.0	04/22/09 22:15	MSB	AA	9D23002
cis-1,3-Dichloropropene	ND		ppbv	2.0	1.0	04/22/09 22:15	MSB	AA	9D23002
trans-1,3-Dichloropropene	ND		ppbv	2.0	1.0	04/22/09 22:15	MSB	AA	9D23002
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		ppbv	2.0	1.0	04/22/09 22:15	MSB	AA	9D23002
Ethylbenzene	ND		ppbv	2.0	1.0	04/22/09 22:15	M\$B	AA	9D23002
4-Ethyltoluene	ND		ppbv	2.0	1.0	04/22/09 22:15	MSB	AA	9D23002
Hexachlorobutadiene	ND		ppbv	4.0	1.0	04/22/09 22:15	MSB	AA	9D23002
2-Hexanone	ND		ppbv	10	1.0	04/22/09 22:15	MSB	AA	9D23002
Methylene chloride	ND		ppbv	2,0	1.0	04/22/09 22:15	MSB	AA	9D23002
4-Methyl-2-pentanone (MIBK)	NĐ		ppbv	10	1.0	04/22/09 22:15	MSB	AA	9D23002
Styrene	ND		ppbv	2.0	1,0	04/22/09 22:15	MSB	AA	9D23002
1,1,2,2-Tetrachloroethane	ND		ppbv	2.0	1.0	04/22/09 22:15	MSB	AA	9D23002
Tetrachloroethene	4.2		ppbv	2.0	1.0	04/22/09 22:15	MSB	AA	9D23002
Toluene	ND		ppbv	2.0	1.0	04/22/09 22:15	MSB	AA	9D23002
1,2,4-Trichlorobenzene	ND		ppbv	5,0	1.0	04/22/09 22:15	MSB	AA	9D23002
1,1,1-Trichloroethane	ND		ppbv	2.0	1.0	04/22/09 22:15	M\$B	AA	9D23002
1,1,2-Trichloroethane	ND		ppbv	2,0	1.0	04/22/09 22:15	MSB	AA	9D23002
Trichloroethene	6.7		ppbv	2.0	1.0	04/22/09 22:15	MSB	AA	9D23002
Trichlorofluoromethane	ND		ppbv	2.0	1.0	04/22/09 22:15	MSB	AA	9D23002
1,1,2-Trichloro-1,2,2-trifluoroethane	8.0		ppbv	2.0	1.0	04/22/09 22:15	MSB	AA	91)23002



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Bureau Veritas N.A. Inc 1565 MacArthur Blvd Costa Mesa, CA 92626 Gustavo Valdivia Work Order:

LSD0209

Received:

04/22/09 09:30

Reported:

04/28/09 12:55

Project:

City of Burbank

Project Number: 25098-098191.01.001

#### ANALYTICAL REPORT

		Data				Date			QC
Analyte	Result	Qualifiers	Units	RL	Dilution	Analyzed	Instrument	Analyst	Batch
Sample ID: LSD0209-01 (B-1-V EPA TO14A - Volatile Organic Co	,					Samp	led: 04/20/09 1	1:25	
1,2,4-Trimethylbenzene	ND		ppbv	3.0	1.0	04/22/09 22:15	MSB	AA	9D23002
1,3,5-Trimethylbenzene	ND		ppbv	3.0	1.0	04/22/09 22:15	MSB	AA	9D23002
Vinyl acetate	ND		ppbv	10	1.0	04/22/09 22:15	MSB	AA	9D23002
Vinyl chloride	ND		ppbv	4.0	1.0	04/22/09 22:15	MSB	AA	9D23002
Xylenes, total	ND		ppbv	2.0	1.0	04/22/09 22:15	MSB	AA	9D23002



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# PROJECT QUALITY CONTROL DATA

#### Blank

		Data				Date			QC
Analyte	Result	Qualifier	Units	RL	Dilution	Analyzed	Instrument	Analyst	Batch
Sample ID: 9D23002-BLK1 (Blan	k - Air)								
EPA TO14A - Volatile Organic C	•	C/MS							
ETA TOTAA - Volatile Organie C	ompounds by C	10/1415							
Acetone	ND		ppbv	10	1.00	04/22/09 11:09	MSB	AA	9D23002
Benzene	ND		ppbv	3.0	1.00	04/22/09 11:09	MSB	AA	9D23002
Benzyl chloride	ND		ppbv	10	1.00	04/22/09 11:09	MSB	AA	9D23002
Bromodichloromethane	ND		ppbv	2.0	1.00	04/22/09 11:09	MSB	AA	9D23002
Bromoform	ND		ppbv	2.0	1.00	04/22/09 11:09	MSB	AA	9D23002
Bromomethane	ND		ppbv	4.0	1.00	04/22/09 11:09	MSB	AA	9D23002
2-Butanone (MEK)	ND		ppbv	10	1,00	04/22/09 11:09	MSB	AA	9D23002
Carbon disulfide	ND		ppbv	10	1.00	04/22/09 11:09	MSB	AA	9D23002
Carbon tetrachloride	ND		ppbv	2.0	1.00	04/22/09 11:09	MSB	AA	9D23002
Chlorobenzene	ND		ppbv	2.0	1.00	04/22/09 11:09	MSB	AA	9D23002
Dibromochloromethane	ND		ppbv	2.0	1.00	04/22/09 11:09	MSB	AA	9D23002
Chioroethane	ND		ppbv	4.0	1.00	04/22/09 11:09	MSB	AA	9D23002
Chloroform	ND		ppbv	2.0	1.00	04/22/09 11:09	MSB	AA	9D23002
Chloromethane	ND		ppbv	4.0	1.00	04/22/09 11:09	MSB	AA	9D23002
1,2-Dibromoethane (EDB)	ND		ppbv	2.0	1.00	04/22/09 11:09	MSB	AA	9D23002
1,2-Dichlorobenzene	ND		ppbv	2.0	1.00	04/22/09 11:09	MSB	AA	9D23002
1,3-Dichlorobenzene	ND		ppbv	4.0	1.00	04/22/09 11:09	MSB	AA	9D23002
1,4-Dichlorobenzene	ND		ppbv	4.0	1.00	04/22/09 11:09	MSB	AA	9D23002
Dichlorodifluoromethane	ND		ppbv	3.0	1.00	04/22/09 11:09	MSB	AA	9D23002
1,1-Dichloroethane	ND		ppbv	2.0	1.00	04/22/09 11:09	MSB	AA	9D23002
1,2-Dichloroethane	ND		ppbv	3,0	1.00	04/22/09 11:09	MSB	AA	9D23002
cis-1,2-Dichloroethene	ND		ppbv	2.0	1.00	04/22/09 11:09	MSB	AA	9D23002
trans-1,2-Dichloroethene	ND		ppbv	2.0	1.00	04/22/09 11:09	MSB	AA	9D23002
1,1-Dichtoroethene	ND		ppbv	2.0	1.00	04/22/09 11:09	MSB	AA	9D23002
1,2-Dichloropropane	ND		ppbv	3,0	1.00	04/22/09 11:09	MSB	AA	9D23002
cis-1,3-Dichloropropene	ND		ppbv	2.0	1.00	04/22/09 11:09	MSB	AA	9D23002
trans-1,3-Dichloropropene	ND		ppbv	2.0	1.00	04/22/09 11:09	MSB	AA	9D23002
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		ppbv	2,0	1.00	04/22/09 11:09	MSB	AA	9D23002
Ethylbenzene	ND		ppbv	2.0	1.00	04/22/09 11:09	MSB	AA	9D23002
4-Ethyltoluene	ND		ppbv	2.0	1,00	04/22/09 11:09	MSB	AA	9D23002
Hexachlorobutadiene	ND		ppbv	4.0	1.00	04/22/09 11:09	MSB	AA	9D23002
2-Hexanone	ND		ppbv	10	1.00	04/22/09 11:09	MSB	AA	9D23002
Methylene chłoride	ND		ppbv	2.0	1.00	04/22/09 11:09	MSB	AA	9D23002
4-Methyl-2-pentanone (MIBK)	ND		ppbv	10	1.00	04/22/09 11:09	MSB	AA	9D23002
Styrene	ND		ppbv	2.0	1.00	04/22/09 11:09	MSB	AA	9D23002
1,1,2,2-Tetrachloroethane	ND		ppbv	2.0	1.00	04/22/09 11:09	M\$B	AA	9D23002
Tetrachloroethene	ND		ppbv	2.0	1.00	04/22/09 11:09	MSB	AA	9D23002
Toluene	ND		ppbv	2.0	1.00	04/22/09 11:09	MSB	AA	9D23002
1,2,4-Trichlorobenzene	ND		ppbv	5.0	1.00	04/22/09 11:09	MSB	AA	9D23002



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Work Order:

LSD0209

Received:

04/22/09 09:30

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04/28/09 12:55

Project: Project Number: City of Burbank

25098-098191.01.001

# PROJECT QUALITY CONTROL DATA

#### Blank - Cont.

		Data				Date			QC
Analyte	Result	Qualifier	Units	RL	Dilution	Analyzed	Instrument	Analyst	Batch
Sample ID: 9D23002-BLK1 (Blan	k - Air) - cont.								
EPA TO14A - Volatile Organic C	ompounds by C	GC/MS							
1,1,1-Trichloroethane	ND		ppbv	2.0	1.00	04/22/09 11:09	MSB	AA	9D23002
1,1,2-Trichloroethane	ND		ppbv	2.0	1.00	04/22/09 11:09	MSB	AA	9D23002
Trichloroethene	ND		ppbv	2.0	1.00	04/22/09 11:09	MSB	AA	9D23002
Trichlorofluoromethane	ND		ppbv	2.0	1.00	04/22/09 11:09	MSB	AA	9D23002
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		ppbv	2.0	1.00	04/22/09 11:09	MSB	AA	9D23002
1,2,4-Trimethylbenzene	ND		ppbv	3.0	00,1	04/22/09 11:09	MSB	AA	9D23002
1,3,5-Trimethylbenzene	ND		ppbv	3.0	1.00	04/22/09 11:09	MSB	AA	9D23002
Vinyl acetate	ND		ppbv	10	1.00	04/22/09 11:09	MSB	AA	9D23002
Vinyl chloride	ND		ppbv	4.0	1.00	04/22/09 11:09	MSB	AA	9D23002
Xylenes, total	ND		ppbv	2.0	1,00	04/22/09 11:09	MSB	AA	9D23002

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3585 Cadillac Avenue, Suite A Costa Mesa, CA 92626 \* 714-258-8610 \* Fax 714-258-0921

Bureau Veritas N.A. Inc 1565 MacArthur Blvd Costa Mesa, CA 92626 Gustavo Valdivia Work Order:

LSD0209

Received:

04/22/09 09:30

Reported:

04/28/09 12:55

Project:
Project Number:

City of Burbank 25098-098191.01.001

## PROJECT QUALITY CONTROL DATA

#### LCS

		Data				Spike		Target		Date	QC
Analyte	Result	Qualifiers	Units	RL	Dilution	Сопе	% Rec	Range	Instrument	Analyzed	Batch
Sample ID: 9D23002-BS1 (LCS - A	.ir)										
EPA TO14A - Volatile Organic Co	mpounds by	GC/MS									
Acetone	63.2		ppbv	10	1.00	53.0	119%	70 - 130	MSB	04/22/09 05:09	9D23002
Benzyl chloride	47.0		ppbv	10	1.00	50.0	94%	45 - 135	MSB	04/22/09 05:09	9D23002
Bromoform	57.9		ppbv	2,0	1.00	50.0	116%	70 - 130	MSB	04/22/09 05:09	9D23002
Carbon tetrachloride	40.8		ppbv	2.0	1.00	53.0	77%	20 - 150	MSB	04/22/09 05:09	9D23002
Dibromochloromethane	53.7		ppbv	2.0	1.00	54.5	99%	70 - 115	MSB	04/22/09 05:09	9D23002
Chloroethane	54.3		ppbv	4.0	1.00	50.0	109%	70 - 120	MSB	04/22/09 05:09	9D23002
Chloromethane	32.7		ppbv	4.0	1.00	50.0	65%	60 - 120	MSB	04/22/09 05:09	9D23002
1,2-Dibromoethane (EDB)	56.1		ppbv	2.0	1.00	50.0	112%	70 - 115	MSB	04/22/09 05:09	9D23002
trans-1,3-Dichloropropene	49.2		ppbv	2.0	1.00	54.5	90%	50 - 115	MSB	04/22/09 05:09	9D23002
1,2-Dichloro-1,1,2,2-tetrafluoroethane	56.3		ppbv	2.0	1.00	50.0	113%	45 - 140	MSB	04/22/09 05:09	9D23002
Hexachlorobutadiene	65.5		ppbv	4.0	1.00	47.0	139%	55 - 140	MSB	04/22/09 05:09	9D23002
2-Hexanone	54.7		ppbv	10	1.00	54.0	101%	70 - 130	MSB	04/22/09 05:09	9D23002
4-Methyl-2-pentanone (MIBK)	52.2		ppbv	10	1.00	54.5	96%	70 - 125	MSB	04/22/09 05:09	9D23002
1,2,4-Trichlorobenzene	60.4		ppbv	5.0	1.00	45.0	134%	45 - 145	MSB	04/22/09 05:09	9D23002
1,3,5-Trimethylbenzene	60.5		ppbv	3.0	1.00	50.0	121%	70 - 130	MSB	04/22/09 05:09	9D23002
Vinyl acetate	31.3		ppbv	10	1.00	41.0	76%	20 - 140	MSB	04/22/09 05:09	9D23002



3585 Cadillac Avenue, Suite A Costa Mesa, CA 92626 \* 714-258-8610 \* Fax 714-258-0921

Bureau Veritas N.A. Inc 1565 MacArthur Blvd Costa Mesa, CA 92626 Gustavo Valdivia Work Order:

LSD0209

Received:

04/22/09 09:30

Reported:

04/28/09 12:55

Project:
Project Number:

City of Burbank

ber: 25098-098191.01.001

# PROJECT QUALITY CONTROL DATA

## LCS Dup

		Data				Spike		Target			Date	QC
Analyte	Result	Qualifiers	Units	RL	Dilution	Conc	% Rec	Range	RPD	Limit	Analyzed	Batch
Sample ID: 9D23002-BSD1 (LCS I	Dup - Air)											
EPA TO14A - Volatile Organic Co	empounds by	GC/MS										
Acetone	51.4		ppbv	10	1.00	53.0	97%	70 - 130	21	25	04/22/09 05:45	9D23002
Benzyl chloride	41.2		ppbv	10	1.00	50.0	82%	45 - 135	13	25	04/22/09 05:45	9D23002
Bromoform	53.6		ppbv	2.0	1.00	50.0	107%	70 - 130	8	25	04/22/09 05:45	9D23002
Carbon tetrachioride	34.8		ppbv	2.0	1.00	53.0	66%	20 - 150	16	25	04/22/09 05:45	9D23002
Dibromochloromethane	52.4		ppbv	2.0	1.00	54.5	96%	70 - 115	2	25	04/22/09 05:45	9D23002
Chloroethane	51.2		ppbv	4.0	1.00	50.0	102%	70 - 120	6	25	04/22/09 05:45	9D23002
Chloromethane	30.7		ppbv	4.0	1.00	50.0	61%	60 - 120	6	25	04/22/09 05:45	9D23002
1,2-Dibromoethane (EDB)	49.6		ppbv	2.0	1.00	50.0	99%	70 - 115	12	25	04/22/09 05:45	9D23002
trans-1,3-Dichloropropene	47.6		ppbv	2.0	1,00	54,5	87%	50 - 115	3	25	04/22/09 05:45	9D23002
1,2-Dichloro-1,1,2,2-tetrafluoroethane	52.3		ppbv	2.0	1.00	50.0	105%	45 - 140	7	25	04/22/09 05:45	9D23002
Hexachlorobutadiene	55.4		ppbv	4.0	1.00	47,0	118%	55 - 140	17	25	04/22/09 05:45	9D23002
2-Hexanone	47.8		ppbv	10	1,00	54.0	89%	70 - 130	14	25	04/22/09 05:45	9D23002
4-Methyl-2-pentanone (MIBK)	47.7		ppbv	10	1.00	54.5	88%	70 - 125	9	25	04/22/09 05:45	9D23002
1,2,4-Trichlorobenzene	51.6		ppbv	5.0	1.00	45.0	115%	45 - 145	16	25	04/22/09 05:45	9D23002
1,3,5-Trimethylbenzene	48.3		ppbv	3.0	1.00	50.0	97%	70 - 130	22	25	04/22/09 05:45	9D23002
Vinyl acetate	31.7		ppbv	10	1.00	41.0	77%	20 - 140	1	25	04/22/09 05:45	9D23002



3585 Cadillac Avenue, Suite A Costa Mesa, CA 92626 \* 714-258-8610 \* Fax 714-258-0921

Bureau Veritas N.A. Inc 1565 MacArthur Blvd Costa Mesa, CA 92626 Gustavo Valdivia Work Order:

LSD0209

Received: Reported: 04/22/09 09:30 04/28/09 12:55

Project:

City of Burbank

Project Number:

25098-098191.01.001

#### DATA QUALIFIERS AND DEFINITIONS

ND Not detected at the reporting limit (or method detection limit if shown)

9 of 14 LSD0209



# Chain of Custody Record

Turn Around Time (TAT)	Normal		Phone 🏻 Fax	Hardcopy LC EDD A	,
Turn A	Rush 🗆	Rush TAT	Results Delivery: Phone	<b></b>	

2.8	•	Results Delivery: Phone   Fax	Тп
TAS	1565 MacArthur Blvd., Costa Mesa, CA 92626 Phone: 714.431.4100 Fax: 714.825.0685	Hardcopy EC EDD 🕏	$\mathbf{x}_{1}$
25083-098181.01.001	DOORSY	PAGE OF(	_

									 	 	 			<del></del>	
•••••			•				Remarks						·	Total Number of Samples (This Shipment)	
Pe			-												
<b>Analysis Requested</b>			-		-										
Апа	1 1	77	7												Collector's Signature:
	7	, 	, T	`` <i>C</i> ,	<u> </u>		Cont.	X							Collector
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C	g g	ATION:	9/10	To	=/		Matrix	# 1/TIR						Total Number of Containers (This Shipment)	
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		,	105TAUS VACOLULA	7.52			Location	3245	***************************************						rint]
1010	01/12	OICE TO:	(1057AW			Sample		8002		•••					Collected by: [Print]
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	Collected by: (Print)	12:11
CHAIN	Relinquished by:	V
OF	Relinquished by	7
CUSTODY	Method of Shipment:	
	Sample Condition Upon Receipt (Circle):	Circle):

Other (Explain)

Pink= Client

7,7 Date/Time % Date/Time Date/Time

Received by Christian Collector's Signature:

Received at Latr by Received by:

Date/Time U Date/Time

White= Project Manager

Distribution:

Acceptable

TestAmerica

# CANISTER FIELD DATA RECORD

CLIENT: BUYEAU VERITAS  CANISTER SERIAL #: 6L0101  DATE CLEANED: 0406090  CLIENT SAMPLE #: SITE LOCATION:				VFR ID:				
READING	TIME		Inches Hg) ESS. (psig)	DATE		INITIALS		
INITIAL VACUUM CHECK		-(	~O``	4/15/09				
INITIAL FIELD VACUUM					<u>-</u>			
FINAL FIELD READING								
LABORATORY CANISTER PRESSURIZATION								
INITIAL VACUUM (Inches Hg / PSIA) (circle unit used))				4-22-09		M		
FINAL PRESSURE (PSIA)	IAL PRESSURE (PSIA)			4-22-09		AP		
Pressurization Gas: W~  COMPOSITE   FLOW RATE RANGE								
COMMENTS:				TIME (HOURS)		(ml/min) 316 333		
				15 Min. 30 Min.	_	158 166.7		
				1		79.2 - 83.3		
				2		39.6 - 41.7		
				4	ļ	19.8 – 20.8 13.2 – 13.9		
				6 8	9.9 - 10.4			
				10	7.92 - 8.3			
				12		6.6 - 6.9		

N:\CONDOCS\TestAmerica DOCs\TestAmerica - CANISTER FIELD DATA RECORD - 20080201.doc

# CANISTER QC CERTIFICATION



Certification Type:	TO-15 ML				
Date Cleaned/Batch	4-6-09D				
Date of QC	4-7.09				
Data File Number	4-7-09 MBO4076 (MSA)				
	CANISTER ID NUMBERS				
*GL0101					
	**************************************				
	MANAGE TO THE PARTY OF THE PART				
	ned as a batch. This certifies this batch contains no eater than or equal to the method criteria for the poove.				
"*" INDICATES THE C	CAN OR CANS WHICH WERE SCREENED.				
M	48/09				
Reviewed By:	Date: N:\CONDOCS\TestAmerica DOCs\Can QC Cert 20070712.doc				

Page 1

Data File: \LAPC065\MSA C\CHEM\MSA.I\090407.B\MB04076.D

Report Date: 08-Apr-2009 00:42

#### TestAmerica Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file: \\LAPC065\MSA C\CHEM\MSA.I\090407.B\MB04076.D

Lab Smp Id: BLANK Client Smp ID: GL0101

Inj Date : 08-APR-2009 00:17

Operator : AA Smp Info : BLANK, GL0101, SCREEN BLANK Inst ID: MSA.i

Misc Info: 1,1,500,500,3,,BLANK,CORP.SUB,0

Comment

: \\LAPC065\MSA\_C\CHEM\MSA.I\090407.B\T014A.m Method Quant Type: ISTD Cal File: IC04038.D QC Sample: BLANK Meth Date: 07-Apr-2009 16:27 almagroa Cal Date : 03-APR-2009 19:28 Als bottle: 3

Dil Factor: 1.00000 Integrator: HP RTE

Compound Sublist: CORP.SUB

Subtraction File: \\LAPC065\MSA\_C

Target Version: 4.04 Processing Host: LAPC065

Concentration Formula: Amt \* DF \* (FinalPres / InitPres)\*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

								Concentrations	
			QUANT SIG					ON-COLUMN	PINAL
Compounds		ounds	MASS	RT	exp rt	REL RT	response	( ppbv)	( ppbv)
,	: 22 22 22	医自己性性性 医甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基	пппп	20 20	020000		======		20000000
	58	Bromochloromethane	. 49	8.398	8.414	(1,000)	778330	50.0000	
\$	66	1,2-Dichloroethane-d4	65	9.399	9.415	(1.119)	630715	55.7780	55.78
•	75	1,4-Difluorobenzene	114	10.166	10,181	(1.000)	1843127	50.0000	
\$	90	Toluene-d8	100	12.700	12.725	(1.249)	920515	49.1864	49.19
1	101	Chlorobenzene-d5	117	15.316	15.322	(1.000)	1425849	50.0000	
Ş	117	4-Bromofluorobenzene	95	17.534	17,541	(1.145)	1569926	52.6740	52.67

